Connected subgraphs in edge-coloured graphs

Henry Liu

Sun Yat-sen University, Guangzhou, China

18 September 2017 (Monday), 3pm to 4pm
Room 416, School of Mathematics, Sun Yat-sen University

Whenever the edges of a graph G on n vertices are coloured with r colours, on how many vertices can we find a monochromatic, connected subgraph? In this talk, we consider this Ramsey theory type question and its variants, such as replacing "monochromatic" by "s-coloured" (for some $s \leq r$); asking for a specific type of connected subgraph; and putting a condition on the r-colouring of G. Many open questions will be presented.

This talk is based on a joint survey with Shinya Fujita (Yokohama City University, Japan) and Colton Magnant (Georgia Southern University, USA).